

SWBAT: differentiate between transverse and longitudinal waves

Jan 4-7:20 AM

Welcome!!!

H. Leslie Grebe

SECA Physics
Thursday 9 April 2015

- * Pick up:
 - blue concept sheet
 - worksheet
 - slip of paper (for later)



Opening Activity:

Read the "Commit and Toss" sheet and pick an answer

----> NO NAMES

Centering



Sep 7-7:04 AM

COMMIT & TOSS (white piece of paper):

Pick a choice on the sheet (circle it / write it)

→ No names ←

Crumple up the paper and toss it into the bucket

WHY MIGHT SOMEONE PICK THAT?

Apr 12-7:13 AM

Let's do "The Wave" = THE PULSE

REPEATS

Vibrations through a medium

→ ONE VIBRATION

<http://www.youtube.com/watch?v=3NxLh-3DdaE>

OBSERVATION:

VIBRATIONS TRAVEL THROUGH

A MEDIUM BUT DO NOT

TAKE THE MEDIUM WITH IT

New terms: transverse and longitudinal

Let's watch a simulation...



<https://phet.colorado.edu/en/simulation/wave-interference>

Apr 14-7:34 AM

Concept Sheet

~ 7 rows when we're done...

We'll fill in two terms (rows) today.

Concept	Meaning	Sym- bol	Units	Picture
FREQUENCY	HOW MANY PER UNIT OF TIME $\text{FREQ} = \frac{\#}{\text{TIME}}$	f $f = \frac{1}{T}$	hertz $\text{Hz} = \frac{1}{\text{sec}}$	
PERIOD	HOW MUCH TIME FOR ONE. $\text{PERIOD} = \frac{\text{TIME}}{\#}$	T $T = \frac{1}{f}$	seconds sec.	
TRANSVERSE:	WHEN THE MEDIUM VIBRATES <u>ACROSS</u> THE DIRECTION THE WAVE TRAVELS.	MEDIUM		
LONGITUDINAL:	WHEN THE MEDIUM VIBRATES <u>ALONG</u> THE DIRECTION THE WAVE TRAVELS.	MEDIUM		

Feb 18-6:50 AM

Common Misconception: We hear because air molecules move from mouth to ear

What evidence do we have that this is not how it works?

Slinky:
Simulator:
Sound:

OBSERVATION:
VIBRATIONS TRAVEL THROUGH
A MEDIUM BUT DO NOT
TAKE THE MEDIUM WITH IT

· DON'T FEEL A BREEZE
· BREATHING IN NOISES
Flip · CAN'T SMELL BREATH OF EVERYONE
YOU HEAR

Apr 10-7:14 AM

puppy popper?

Daily 3 Questions

- * Every day except test/project days
- * 3 Questions on the topics of the day
- * Main source of daily points
- * I am happy to give credit when I have no concerns about someone giving or getting help with the answers.

CP hmwk: Two higher-order questions on notes

You can't get your points if you don't have your NAME!!!

Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

1) The physics name for a single (lone) vibration is

- ☒ A. pulse
- ☐ B. wave
- ☐ C. sound

2) When the medium vibrates **along** the direction the wave travels, it is called

- ☐ A. transverse
- ☒ B. longitudinal
- ☐ C. period

3) What is one reason we know air molecules don't travel from mouth to ear for us to hear?

- CAN'T SMELL ALL PEOPLE YOU HEAR
- PEOPLE STAY AT THEIR SEATS IN "WAVE"
- CAN'T FEEL BREATH WHEN HEARING

Apr 12-7:15 AM